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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,062	02/14/2001	Kenji Nishi	108601	1857

25944 7590 09/09/2004

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EXAMINER	
BROWN, KHALED	
ART UNIT	**PAPER NUMBER**
2877	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/782,062	NISHI, KENJI	
	Examiner	Art Unit	
	Khaled Brown	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,23-29,53,54 and 56-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,10,23,24,29,53,54 and 56-58* is/are rejected.

7)☒ Claim(s) *2,9 and 25-28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 7-21-04 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,5-8,23,53,54,56,57 and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker (US 5197089).

Re clms 1,5,7,8,56: Baker discloses an exposure method for exposing one of a first object/mask (Baker 38) and a second object/substrate (Baker 40) with an exposure light beam passing through the other of the first object and the second object by using an exposure apparatus (Baker Col 3 lines 18-48) provided with an airtight stage chamber

(Baker Col 5 lines 38-42) in which a movable stage is provided (Baker 16), the exposure method comprising: importing the second object/substrate into the airtight stage chamber (Baker Col 5 lines 32-42), wherein an inner wall of a member which forms the airtight stage chamber is formed of or coated with a material involving little gas release (Baker Col 5 lines 40-42); adjusting a position of the second object/substrate with respect to the movable stage in the airtight stage chamber (Baker Col 5 lines 57-60), installing on the movable stage, the second object/substrate which has been adjusted (Baker Col 5 lines 32-34), moving the movable stage to adjust the position of the second object/substrate with respect to an exposure position (Baker Col 5 line 66- Col 6 line 2); and exposing one of the first object and the second object/substrate with the exposure light beam passing through the other of the first object and the second object (Baker Col 3 lines 51-58).

Re clms 53,54: a method of producing a device (Baker Col 1 line 15)

Re clms 6,57: Baker discloses an exposure method for exposing one of a first object and a second object/substrate with an exposure light beam passing through the other of the first object and the second object/substrate, the exposure method comprising: transporting the second object/substrate to a movable stage (Baker Col 5 lines 30-34) by the aid of a transport system (Baker Col 5 lines 43-51), adjusting a position of the second object/substrate with respect to the transport system (Baker Col 5 lines 57-60) on a contour basis (Col 5 lines 52-54) in an airtight chamber in which the movable stage is located (Baker Col 5 lines 38-42) during the transport of the second object/substrate to the movable stage by the aid of the transport system, wherein an inner wall of a

member which forms the airtight chamber is formed of or coated with a material involving little gas release (Baker Col 5 lines 40-42); and exposing one of the first object and the second object/substrate transported to the movable stage with the exposure light beam passing through the other of the first object and the second object (Baker Col 3 lines 51-58).

Re clms 23,58: Baker discloses an exposure apparatus for exposing one of a first object (Baker 38) and a second object/substrate (Baker 40) with an exposure light beam passing through the other of the first object and the second object (Baker Fig 1), the exposure apparatus comprising: a movable stage which adjusts a position of the second object/substrate (1 Baker 6); and a transport system which is arranged in an airtight transport chamber (Baker 90), an inner wall of which is formed of or coated with a material involving little gas release (Baker Col 5 lines 38-42), and which transports the second object/substrate onto the movable stage (Baker Col 5 lines 30-34) , wherein the transport system includes: a handling mechanism (Baker 94) which has two or more degrees of freedom of displacement for incorporating the second object/substrate from the outside (Baker Col 5 lines 46-48); a contour-detecting system which detects position information on a contour of the second object/substrate held by the handling mechanism (Baker Col 5 lines 52-54); and an arm mechanism which has at least one degree of freedom of displacement for transporting the second object/substrate delivered from the handling mechanism in a direction toward the movable stage (Baker 92).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (US 5197089) in view of Mc Eachern et al (US 5677758).

Re clm 3: Baker discloses the claimed apparatus as noted above including a movable stage/substrate stage (Baker 16). However, Baker does not disclose the use of two movable stages/substrate stages. Mc Eachern et al teaches that an exposure apparatus should use two movable stages/substrate stages instead of one because it increases efficiency (Mc Eachern et al Col 4 lines 45-48). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use two movable stage/substrate stages instead of one in the exposure apparatus of Baker because it would increase efficiency as taught by Mc Eachern et al.

6. Claims 4,10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (US 5197089) in view of Kendall (US 5508518).

Re clms 4,10,29: Baker discloses the claimed apparatus as noted above including an airtight stage chamber (Baker Col 5 lines 57-60) and movable stage/substrate stage (Baker 16). However, Baker does not disclose that the airtight stage chamber and

movable stage/substrate stage are incorporated into the exposure apparatus in accordance with a module system. Kendall teaches that an airtight stage chamber and movable stage/substrate stage should be incorporated into an exposure apparatus in accordance with a module system because it reduces vibration thereby allowing a higher throughput (Kendall Col 2 lines 10-13 and Col 3 lines 12-21, 46-48 and 54-56). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to make the airtight stage chamber and movable stage/substrate stage in the apparatus of Baker in accordance with a module system because it would reduce vibration thereby allowing a higher throughput as taught by Kendall.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (US 5197089) in view of Miyai et al (US 5825470).

Re clm 24: Baker discloses the claimed apparatus as noted above including a handling mechanism (Baker 94). However, Baker does not disclose claimed design structure of the handling mechanism including a rotary stand, a first hand, and a second hand and an arm. Miyai et al teaches that a handling mechanism should include a rotary stand, a first hand, a second hand and an arm because it increases throughput (Miyai et al Col 10 lines 1-21). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the handling mechanism in the apparatus of Baker with the handling mechanism of Miyai et al having a rotary stand, a

first hand, a second hand and an arm because it would increase throughput as suggested by Miyai et al.

Allowable Subject Matter

8. Claims 2,9 and 25-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose or suggest the claimed limitations of "management is made so that an allowable value of concentration of an impurity in the gas is higher in the airtight transport chamber than in the airtight stage chamber", "temperature adjustment is performed", a "temperature control system" or "an airtight stage chamber which is included in the airtight transport chamber" all in conjunction with the rest of the claimed subject matter.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Foley 4776745, Yoshitake et al 5909030, Forsyth et al 4980896, Aoyama 6697145, Kamiya 4989031, Miyaji et al 5559584 and Fujie et al 5696623.

11. Note: applicant submitted No IDS with RCE filed 7-21-04.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khaled Brown whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J Toatley Jr. can be reached on 571-272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB
September 6, 2004